

REMARKS

Claims 1-37 remain pending. Applicant respectfully requests reconsideration of this application in light of the following remarks.

I. Regarding the Final Office Action

In the Office Action¹, the Examiner rejected claims 9, 20, and 25 under 35 U.S.C. §112, first paragraph; rejected claims 1, 2, 4-16, 20-26, and 30-35 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,181,805 to Koike et al. ("*Koike*"); rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over *Koike* in view of U.S. Patent No. 5,542,006 to Shustorovich et al. ("*Shustorovich*"); and rejected claims 36 and 37 under 35 U.S.C. § 103(a) as being unpatentable over *Koike* in view of U.S. Patent No. 5,093,869 to Alves et al. ("*Alves*").

In the Office Action, the Examiner also objected to the drawings under 37 C.F.R. § 1.83(a) for allegedly failing to show "the concept of '**complementary recognizers**' or '**complementary recognition algorithm**'" (emphasis in original, Office Action at p. 6).

Applicants gratefully acknowledge the withdrawal of the rejection of claims 17-19 and 27-29 under 35 U.S.C. § 112, second paragraph (Office Action at p. 2); the indication that claims 17-19 and 27-29 contain allowable subject matter (Office Action at p. 13); and the withdrawal of the rejection of claims 21 and 26 under 35 U.S.C. § 112, first paragraph (Office Action at p. 2).

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

Likewise, Applicants gratefully acknowledge the Examiner's indication that "[i]t is so clear that the Applicant invention may be novel over the prior art" (Office Action at p. 5).

Applicants respectfully traverse the Examiner's rejections for the following reasons.

II. Regarding the rejection of claims 9, 20, and 25 under 35 U.S.C. § 112, first paragraph, and regarding the objection to the drawings under 37 C.F.R. § 1.83(a)

Applicants respectfully traverse the rejection of claims 9, 20, and 25 under 35 U.S.C. § 112, first paragraph, as well as the objection to the drawings under 37 C.F.R. § 1.83(a). In response to remarks submitted by Applicants in the Response mailed November 30, 2004, the Examiner asserts:

[t]he Examiner clearly has met the initial burden by indicating that 'complementary recognition algorithms' is not supported in the original disclosure and that one skilled in the art does not understand what complementary recognition algorithms are. Further more, even if 'complementary recognition algorithms' are well known in the art, the Applicant cannot claim it if it does not discuss in the context of specification. The specification should have shown the definition of 'complementary recognition algorithms'

(Office Action at p. 2). Applicants respectfully submit that these assertions do not establish a reasonable basis to question enablement. Moreover, Applicants note M.P.E.P. § 2163 states:

early opinions suggest the Patent and Trademark Office was unwilling to find written descriptive support when the only description was found in the claims; however, this viewpoint was rejected. See *In re Koller*, 613 F.2d 819, 204 USPQ 702 (CCPA 1980) (original claims constitute their own description); accord *In re Gardner*, 475 F.2d 1389, 177 USPQ 396 (CCPA

1973); accord *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).
It is now well accepted that a satisfactory description may be in the claims
or any other portion of the originally filed specification

(emphasis added). Claims 9, 20, and 25 are original, and Applicants therefore
respectfully submit that they constitute their own description.

Moreover, Applicants again direct the Examiner's attention to, for example², page
3 of Applicants' specification, which teaches in part:

pattern recognition systems may combine several recognizers using
multiple recognition algorithms and/or modules thereof to enhance
recognition accuracy. For example, combining several different
recognizers with different matching modules may increase accuracy since
the different recognizers may complement each other in a group decision.

(emphasis added). As shown in, for example, Figures 2-4, and taught in the
accompanying portions of the specification, a plurality of matching modules 212_n may
complement each other using accumulator 214.

At least the sections of Applicants' specification discussed above, as well as the
claims in the original specification, contain sufficient information to enable one skilled in
the pertinent art to make and use the invention, recited in claims 9, 20, and 25, without
undue experimentation. Accordingly, Applicants respectfully request withdrawal of the
enablement rejection of claims 9, 20, and 25 under 35 U.S.C. § 112, first paragraph.

Moreover, Applicants respectfully requests the Examiner to reconsider and
withdraw the objection to the drawings under 37 C.F.R. § 1.83(a), because claims 2-4

² In referring to the specification herein, Applicants do not intend to limit the scope of the claims to the
exemplary embodiments shown in the drawings and described in the specification. Rather, Applicants
expressly affirm their entitlement to have the claims interpreted broadly, to the maximum extent permitted
by statute, regulation, and applicable case law.

illustrate embodiments consistent with “complementary recognizers” and “complementary recognition algorithms,” as discussed above.

III. Regarding the rejection of claims 1, 2, 4-16, 20-26, and 30-35 under 35 U.S.C. § 102(e) as being anticipated by *Koike*

Applicants respectfully traverse the rejection of claims 1, 2, 4-16, 20-26, and 30-35 under 35 U.S.C. § 102(e) as anticipated by *Koike*. In order to properly establish that *Koike* anticipates Applicants' claimed invention under 35 U.S.C. § 102, each and every element of each of the claims in issue must be found, either expressly described or under principles of inherency, in that single reference. Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the ... claim.” See M.P.E.P. § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Koike does not disclose each and every element of Applicants' claimed invention. Claim 1 calls for a combination including, for example,

segmenting a target object from the input object to form a segmented target object;
performing at least one transform on the segmented target object to generate at least one transformed object; and
outputting the segmented target object and the at least one transformed object to at least one pattern recognizer

(emphasis added). *Koike* fails to teach at least “outputting the segmented target object and the at least one transformed object to at least one pattern recognizer,” as recited by claim 1.

In response to remarks submitted by Applicant in the Response mailed November 30, 2004, the Examiner asserts,

[t]he act of shifting the position of selected section of image clearly is an act to do/carry out/perform at least one transform as indicated by Koike on FIG. 1, element 108 and column 4, lines 46-55) on the segmented ... (FIG. 1, element 107A) target object ... (FIG. 1, elements 102 and 109) to generate at least one transformed object (the result after shifting the position of selection section of image) (output from FIG. 1, element 108)

(Office Action at p. 3). Thus, the Examiner has apparently taken the positions that *Koike* teaches (1) "segmenting a target object from the input object to form a segmented target object (FIG 1, elements 102-103)" (Office Action at p. 8), and (2) that a transformed object is generated by "the result after shifting the position of the selection section of image (output from FIG. 1, element 108)" (Office Action at p. 3). Even assuming these assertions are true, *Koike* does not teach or suggest at least "outputting the segmented target object and the at least one transformed object to at least one pattern recognizer," as recited by claim 1.

The Examiner asserts that *Koike* teaches "Outputting ... at FIG. 1 and column 3, lines 57-65; column 4, lines 40-45; column 5, lines 10-15 and lines 25-30; column 7, lines 55-60 (perhaps through out the reference)" (Office Action at p. 3). The Examiner also asserts that *Koike* teaches "outputting the segmented target object (... FIG 1, element 104) and the at least one transformed object (... FIG. 1, element 108) to at least one pattern recognizer (FIG. 1, element 106)" (Office Action at p. 8). This is incorrect.

With reference to Figure 1 of *Koike*, the alleged "transformed object" element 108 is not output to element 106, as asserted by the Examiner. Rather,

element 108 is generated by element 106. Element 107A compares the output of element 108 to the test image input from 105, but does not also receive the output of the alleged segmented object from 104. *Koike* only provides the alleged “transformed target object” (output of element 108 of *Koike*, Figure 1) to 107A. *Koike* thus does not teach or suggest outputting both the alleged “segmented target object” and the alleged “transformed target object,” as recited in claim 1.

Koike thus fails to teach or suggest each and every element recited by claim 1, and required by claims 2 and 4-10 which depend from claim 1. For at least this reason, *Koike* cannot anticipate claims 1, 2, and 4-10. Applicants therefore respectfully request the Examiner to reconsider and withdraw the rejection of claims 1, 2, and 4-10 under 35 U.S.C. § 102(e) as being anticipated by *Koike*.

Independent claim 11 recites a combination including, for example,
receiving an input object;
detecting a target object within the input object;
segmenting the target object from the input object to form a plurality of segmented target objects

(emphasis added). *Koike* fails to teach or suggest at least these elements.

In response to reasoning submitted by Applicant in a previous response mailed November 30, 2004, the Examiner asserts that “*Koike* clearly teaches the ‘detecting a target object within the input object’ (the concept of matching region of the object to be recognized is extracted from each of the object images) (abstract, first 5 lines)” (Office Action at p. 4). However, *Koike*’s abstract teaches in part “a matching region of the

object to be recognized is extracted from each of the object images" (*Koike*, abstract, lines 3-5). Even if *Koike*'s matching regions constitute the claimed "segmenting," as asserted by the Examiner, *Koike* does not teach first detecting "a target object within the input object," as recited by claim 11. Even assuming that *Koike* teaches segmenting an image to form a region, *Koike* nevertheless fails to teach or suggest "detecting a target object within the input object; [and] segmenting the target object," (emphasis added) as recited by claim 11.

Koike thus fails to teach or suggest each and every element recited by claim 11 and required by dependent claims 12-15. For at least this reason, *Koike* cannot anticipate claims 11-15. Applicants therefore respectfully request the Examiner to reconsider and withdraw the rejection of claims 11-15 under 35 U.S.C. § 102(e) as being anticipated by *Koike*.

Independent claim 16 calls for a combination including, for example,

receiving a segmented target object and at least one transform of the segmented target object;
performing at least one pattern recognition algorithm on the segmented target object and the at least one transform to generate a plurality of recognition results;

(emphasis added). *Koike* fails to teach or suggest at least these elements.

In response to reasoning submitted by Applicant in the Response mailed November 30, 2004, the Examiner asserts that "there is 'receiving' is can reasonably interpreted as 'inputting' because if the device/apparatus is inputting then it is receiving" (Office Action at p. 4). Even assuming this assertion is true, the alleged segmented target object, from element 104, and transform, from element 108, are neither received

nor inputted to element 106. Rather, as stated above, element 108 is generated by element 106 (*Koike*, Figure 1). *Koike* thus does not teach or suggest receiving, or inputting, to a pattern recognition algorithm “the segmented target object and the at least one transform to generate a plurality of recognition results,” (emphasis added) as recited by claim 16.

Koike thus fails to teach or suggest each and every element recited by claim 16 and required by dependent claims 20 and 21. For at least this reason, *Koike* cannot anticipate claims 16, 20, and 21. Applicants therefore respectfully request the Examiner to reconsider and withdraw the rejection of claims 16, 20, and 21 under 35 U.S.C. § 102(e) as being anticipated by *Koike*.

Independent claims 22, 30, 32-35, although of different scope, recite elements similar to claims 1, 11, and 16. Claims 23-26 and 31 depend from independent claims 22 and 30, respectively, and therefore include all of the elements recited therein. Claims 22-26 and 30-35 are therefore allowable at least for the reasons discussed above. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the rejection of claims 22-26 and 30-35 under 35 U.S.C. § 102(e) as being anticipated by *Koike*.

IV. Regarding the rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over *Koike* in view of *Schustorovich*

Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 3 because a *prima facie* case of obviousness has not been established with respect to this claim.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). M.P.E.P. § 2142, 8th Ed., Rev. 2 (May 2004), p. 2100-128.

A *prima facie* case of obviousness has not been established because, among other things, neither *Koike* nor *Schustorovich*, taken alone or in combination, teaches or suggests each and every element of Applicants' claims.

Claim 3 depends from claim 1 and therefore includes all of the elements recited therein. As discussed above, claim 1 calls for a combination including, for example,

segmenting a target object from the input object to form a segmented target object;
performing at least one transform on the segmented target object to generate at least one transformed object; and
outputting the segmented target object and the at least one transformed object to at least one pattern recognizer

(emphasis added). *Koike* fails to teach at least "outputting the segmented target object and the at least one transformed object to at least one pattern recognizer," as recited by claim 1 and required by claim 3.

Schustorovich fails to make up for the deficiencies of *Koike*. *Schustorovich* is relied upon for allegedly teaching "handwritten character/pattern recognition wherein the target object can be handwritten character" (Office Action at p. 12). Even assuming this assertion is true, *Schustorovich* nevertheless fails to teach or suggest at least

“outputting the segmented target object and the at least one transformed object to at least one pattern recognizer,” as recited by claim 1 and required by claim 3.

Because neither *Koike* nor *Schustorovich*, taken alone or in combination, teaches or suggests each and every element required by claim 3, no *prima facie* case of obviousness has been established with respect to this claim. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over *Koike* in view of *Schustorovich*.

Moreover, in response to reasoning submitted by Applicant in the Response mailed November 30, 2004, the Examiner asserts that “it would have been obvious to one of the ordinary skill in the art to modify *Koike* according to *Schustorovich* because *Schustorovich* has shown that target object can be handwritten character” (Office Action at p. 5).

First, M.P.E.P. § 2144.04(c) states:

The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device.

(quoting *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984)). The mere fact that *Schustorovich* allegedly teaches “handwritten characters” does not provide motivation or reason for one in the art, without the benefit of Applicants' specification, to make the necessary changes to *Koike*. For at least this additional reason, Applicant respectfully requests the Examiner to reconsider and

withdraw the rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over *Koike* in view of *Schustorovich*.

Second, M.P.E.P. § 706.07(a) states:

second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement

(emphasis added). By changing, in response to Applicants' reasoning in the Response mailed November 30, 2004, the requisite motivation from allegedly to "improve processing" (Office Action mailed September 24, 2004 at p. 7), to allegedly "because *Schustorovich* has shown that target object can be handwritten character" (Office Action mailed June 2, 2005 at p. 5), the Examiner has introduced a new grounds of rejection not necessitated by an amendment or based on information submitted in an information disclosure statement. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the finality of the Office Action mailed June 2, 2005.

V. Regarding the rejection of claims 36 and 37 under 35 U.S.C. § 103(a) as being unpatentable over *Koike* in view of *Alves*

Claims 36 and 37 depend from claims 11 and 34, respectively, and therefore include all of the elements recited therein. As discussed above, *Koike* does not teach or suggest at least "segmenting at least one target object from the input object to form a plurality of segmented target objects," as recited by claims 11 and 34 and required by claims 36 and 37. *Alves* fails to make up for the deficiencies of *Koike*.

The Examiner concedes that *Koike* does not teach or suggest at least detecting or segmenting the target object using “a plurality of algorithms,” as recited by claims 36 and 37 (Office Action at pp. 12, 13). The Examiner cites *Alves* as allegedly teaching “a method of detecting objects (abstract) wherein it is well known ... that various architectures and algorithms can be used in detecting target object (column 1, lines 20-25)” (Office Action at pp. 12-13).

The portion of *Alves* cited by the Examiner mentions “specialized signal processing architectures and algorithms” (*Alves*, column 1, lines 22-23). However, this section of *Alves* is merely background information discussing the existence of algorithms. *Alves* does not teach applying a plurality of algorithms to a detection process. Rather, *Alves* simply states that algorithms exist. This does not constitute a teaching or suggestion of “detecting the target object using a plurality of algorithms,” (emphasis added) as recited by claim 36.

Similarly, *Alves* does not teach or suggest “means for segmenting the at least one target object from the input object to form, for each of a plurality of detection algorithms, a different segmented object,” (emphasis added) as recited by claim 37.

Because neither *Koike* nor *Alves*, taken alone or in combination, teaches or suggests each and every element recited by claims 36 and 37, no *prima facie* case of obviousness has been established with respect to these claims. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 36 and 37 under 35 U.S.C. § 103(a) as being unpatentable over *Koike* in view of *Alves*.

V. Conclusion


In view of the foregoing remarks, Applicant submits that this claimed invention is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore requests the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: September 2, 2005

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